

RECLAIMED WATER

tapping the
new resource

A reclaimed water workshop for Washington State

Welcome

to the *Reclaimed Water: Tapping the New Resource* workshop. By the number of registrants, it is clear that there is great interest statewide in the topic. We are happy that you have joined us today.



Sponsored by Pacific Northwest Clean Water Association
Water Environment Federation Member Association

Co-sponsored by Puget Sound Action Team,
Washington State Department of Ecology,
Washington State Department of Health,
King County, WaterReuse Association



8 a.m. Registration and Coffee

All sessions before lunch will be held in the Emerald Conference Rooms EF

8:25 a.m. Workshop Overview

Allen de Steiguer, *Carollo Engineers*
PNCWA Water Reuse Committee Chair

8:30-8:45 a.m. Welcoming Remarks— Reclaimed Water as a Resource for Local Governments

Ron Sims, *King County Executive*

8:45-9:10 a.m. Reclaimed Water in Washington State—the Outlook for Today and Tomorrow

Jay Manning, *Director, Washington State Department of Ecology*

9:10-9:30 a.m. Reclaimed Water as a Source of Supply—The Department of Health's Perspective

Gregg Grunenfelder, *Assistant Secretary, Division of Environmental Health, Washington State Department of Health*

9:30-9:45 a.m. A Snapshot of National Research and Funding Initiatives

Richard Atwater, *General Manager, Inland Empire Utilities Agency, Chino, CA; President elect, National Water Reuse Association*

9:45-10:05 a.m. The Language of Water— Translating the Jargon

Linda Macpherson, *Vice President—Reuse Technology, CH2M HILL*

10:05-10:30 a.m. “What’s Still in the Water?”— Answering the Recurring Questions

Dr. James Crook, Ph.D., P.E., *Water Reuse Consultant*

10:30 a.m. Refreshments in Foyer

10:45 a.m.-12:15 p.m. Panel: Perspectives on Reclaimed Water

Facilitator Jim Hagstrom, P.E., *Partner, Carollo Engineers*
Hal Thomas, *Public Works Director, City of Walla Walla*
Rich Hoey, *Director of Water Resources, City of Olympia*
Daryl Williams, *Natural Resource Director of the Tulalip Tribe*
Rachael Paschal Osborn, *Acting Executive Director, Center for Environmental Law & Policy*
Dan Golner, *Manager of Conservation Programs, Ducks Unlimited Inc.*

12:15-1:15 p.m. Lunch and Luncheon Speakers

Emerald Conference Rooms ABCD

◆ **Introductory Comments**

Kathy Cupps P.E., *Water Reuse Lead, Washington Department of Ecology*

◆ **Lessons Learned from Florida—Experience with Drivers and Barriers to Reclaimed Water Use**

David York, Ph.D, P.E., *Water Consultant*

1:15-3:15 p.m. Afternoon Breakout Sessions— Identifying Barriers and Possible Solutions for Differ- ent Facets of Reclaimed Water Use in Washington

Facilitator Mike Sharar, *Consultant and former Director, LOTT (Lacey, Olympia, Tumwater and Thurston County) Alliance*

◆ **Producing Reclaimed Water:**

A Treatment Operators' Forum

Orcas Conference Room

Facilitator Dick Finger, *Consultant, PNCWA Water Reuse Committee*

Henryk Melcer, *Senior Process Engineer, Brown and Caldwell*

Bob Bucher, *King County Wastewater Treatment Division, Advanced Technology Demonstration Projects*

Ben McConkey, *Operations Supervisor, LOTT Alliance*

◆ **Meeting Customers' Needs: A Water Purveyors' Forum**

Emerald Conference Rooms EF

Facilitator Linda Macpherson, *Vice President, Reuse Technology, CH2M HILL*

Dr. James Crook, Ph.D., P.E., *Water Reuse Consultant*

Kirk Holmes, *Public Works Director, City of Snoqualmie*

Jim Hill, *Water Reclamation Division Administrator, City of Medford, OR*

Robin Saunders, *Director of Water and Sewer Utilities, City of Santa Clara, CA*

◆ **Planning and Implementing a Reclaimed Water Project:**

A Policy Maker and Managers' Forum

Mercer Conference Rooms AB

Facilitator Mark Cullington, *Senior Scientist, Kennedy/Jenks Consultants*

Karla Fowler, *Planning and Programs Director, LOTT Alliance*

Lars Hendron, *Project Manager, City of Spokane*

Scott Redman, *Puget Sound Action Team*

3:15 p.m. Refreshments in Foyer

3:30-4:30 p.m. Reporting Back and Next Steps

Mike Sharar and Facilitators

Emerald Conference Rooms EF

4:30-5:00 p.m. Refreshments & Informal Networking *Celebration of Signed Reclaimed Water Statement of Support*





Ron Sims, King County Executive

Ron Sims has built his career in public service around the progressive principles of social justice, good government and environmental stewardship. With a national reputation for boldness and vision, Sims is a champion for reforming government processes to more effectively serve the people of the Puget Sound region. Currently in his third term as county executive, Sims has established a strong record of environmental protection in the areas of transportation, land use, environmental management and clean energy. At the heart of his work on climate change is a belief that only by working collaboratively across traditional boundaries will we be able to resolve issues. Under Sims’ leadership, King County Metro Transit is now one of the greenest fleets in the nation. King County became the nation’s first county and first major transit agency to join the Chicago Climate Exchange. Sims was nationally distinguished in November 2006 as *Governing Magazine’s* Public Official of the Year, highlighting his “across-the-board” innovation, especially in combating climate change. Sims’ leadership in climate change adaptation was the subject of a *U.S. News and World Report* cover story in summer 2006.



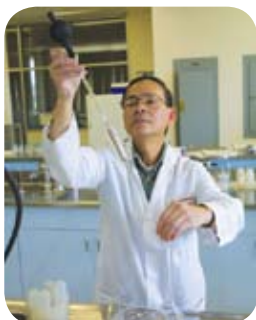
Jay Manning, Director, Washington State Department of Ecology

Jay Manning is director of the Washington State Department of Ecology (Ecology). Appointed in February 2005, Manning oversees an annual operating budget of \$429 million. As the state’s primary environmental agency, the Department of Ecology administers programs addressing water quality and quantity; air quality; solid, hazardous and nuclear waste management and disposal; oil spill prevention and response; and shoreline and wetland protection. Known for establishing statewide partnerships charged with protecting Washington State’s environmental resources, Manning was instrumental in passage of Governor Gregoire’s Puget Sound Initiative. Before coming to Ecology, Manning spent six years in private law practice, most recently as the managing partner of Brown, Reavis and Manning PLLC. Before that, Manning spent 15 years working as an assistant attorney general, including nearly six years as head of the Ecology Division.



Gregg Grunenfelder, Assistant Secretary, Division of Environmental Health, Washington State Department of Health

Gregg Grunenfelder serves as assistant secretary of the Washington State Department of Health, Division of Environmental Health, whose mission is improving public health by reducing exposures to environmental hazards. Prior to his current position, he served as director for the state Drinking Water Program beginning in 1997. Grunenfelder was former director of Thurston County Environmental Health, managing multiple environmental health programs for eight years. After graduating from WSU with a degree in bacteriology and public health, he served two years in the Peace Corps as a health educator in Malaysia. While with the International Rescue Committee in 1981, he worked with Cambodian refugees to raise awareness of health issues around sanitation. His continuing promotion and implementation of sanitation education programs and projects in Zaire and Rwanda significantly reduced death rates in refugee camps of a hundred thousand or more.



Rich Atwater, General Manager, Inland Empire Utilities Agency, Chino, California and President Elect, National WaterReuse Association

Rich Atwater began his position as CEO and general manager with the Inland Empire Utilities Agency in July 1999. With over twenty years experience in water resources management and development in the western United States, he pioneered many award-winning projects and innovative water resource management programs meeting today’s high standards for quality, reliability and cost-effectiveness. With considerable public agency experience developing some of the largest U.S. water projects, Atwater has testified extensively before the United States Congress and the California Legislature on water policy issues. His previous experience includes managing the Metropolitan Water District of Southern California Resources Division. From 1981 to 1985, he was assistant to the commissioner of the federal Bureau of Reclamation, Department of the Interior.





**Linda Macpherson, Vice President, Reuse Principal Technologist,
Senior Water Policy Planner and Public Involvement Specialist, CH2M HILL**

Linda Macpherson is an international advocate and strategist for water reuse education. From introducing the public to the nation's first poplar tree/wastewater reuse project to development director for the Republic of Singapore's NEWater Visitor's Centre, she has been at the forefront of building public acceptance for reuse. The NEWater Centre set a benchmark for water reuse education and is a testament to the synergistic power of the "right stuff" vision, political support, engineering, innovative communication, and messaging. Macpherson is a vice president and senior policy planner for CH2M HILL. Often charged with building consensus among parties grappling with challenging water reuse issues, she specializes in translating complex issues into clear vernacular. She is a highly valued speaker before the American Water Works Association, the Water Environment Federation (WEF), the WaterReuse Association and the Australian Water Association. Recognized nationally for her work with the Association of Clean Water Agencies and America's Clean Water Foundation, Macpherson is a member of the Oregon Department of Environmental Quality Reuse Task Force.



**Dr. James Crook, Ph.D., P.E., Water Reuse Consultant and Primary Author
*Irrigation of Parks, Playgrounds, and Schoolyards with Reclaimed Water:
Extent and Safety***

James Crook is an environmental engineer with more than 30 years experience in state government and consulting engineering arenas, serving public and private sectors in the U.S. and abroad. He has authored more than 100 publications and is an internationally recognized expert in water reclamation and reuse. Previously, he spent 15 years directing the California Department of Health Services' water reuse program and developed California's first comprehensive water reuse criteria. He was the principal author of the *Guidelines for Water Reuse*, published by the U.S. Environmental Protection Agency and US Agency for International Development. His honors include selection as the American Academy of Environmental Engineers' 2002 Kappe Lecturer.



Jim Hagstrom, Partner, Carollo Engineers

Jim Hagstrom has 18 years of experience in planning, design and construction management of water and wastewater treatment facilities. As the firm's Northwest regional manager and lead wastewater membrane technologist, Jim has been instrumental in the development and application of membrane technologies for two key projects for King County, Washington that will produce Class A reclaimed water; the Carnation Wastewater Treatment Facility, and the Brightwater Wastewater Treatment Plant. Jim was partner-in-charge of the Lakehaven Utility District's Reclaimed Water Feasibility Study and was a member of the treatment technology assessment team for the Reclaimed Water Master Plan for Clean Water Services in Hillsboro, Oregon.



Hal Thomas, Public Works Director, City of Walla Walla

Hal Thomas served in the U.S. Navy from 1973-1996 where he earned a masters in Mechanical Engineering, and masters in International Relations/Strategic Studies and served as a naval facilities engineer/public works director. After leaving the service, Thomas had several positions with private consultants before serving as public works assistant and interim public works director for the City of Walla Walla. Thomas became public works director for Walla Walla in 2001. He serves on various state and local committees, including board member of the American Public Works Association, Washington Chapter.



Rich Hoey, Director of Water Resources, City of Olympia, Public Works Department

Rich Hoey oversees the drinking water, wastewater, and storm and surface water utilities. Prior to joining the City of Olympia in 2005, Hoey spent 13 years with the Washington State Department of Health, Office of Drinking Water where he served as deputy director for field operations and acting director. Hoey is a registered professional engineer in the State of Washington, and currently serves on the board of the Partnership for Water Conservation. Hoey is a returned Peace Corps volunteer, having served in the Slovak Republic from 1996 to 1998.



Daryl Williams, Natural Resource Director of the Tulalip Tribes

Daryl Williams has worked through the Tulalip Tribes to protect the Tribes' treaty reserved rights for fisheries, wildlife, cultural resources and water resources for more than 21 years. Williams and the Tulalip Tribes work co-operatively with other governments to develop environmental policies and coordinate environmental projects.



**Rachael Paschal Osborn, Acting Executive Director,
Center for Environmental Law & Policy (Seattle, Olympia, Spokane)**

Rachael Paschal Osborn is director of the Center for Environmental Law & Policy, a public interest organization dedicated to restoring Washington's water resources. Osborn teaches water law at Gonzaga Law School and is involved in the Spokane River dissolved oxygen Total Maximum Daily Loads (TDML) process.



Dan Golner, Manager of Conservation Programs, Ducks Unlimited, Inc.

Dan Golner has been with Ducks Unlimited (DU) for 8 years. DU is a wetland conservation organization that conserves, restores and manages wetlands and associated habitats for North America's waterfowl and other wetland-dependent species. After working as a regional DU biologist on the Oregon Coast and lower Columbia regions, Dan was promoted to manager of conservation programs for the Puget Sound in 2006. He currently oversees 70 projects. Dan has an M.S. in wildlife biology and management, and before coming to DU worked as a wetlands researcher in Washington, Oregon, Idaho and the Dakotas.



David York, Ph.D, P.E., Water Consultant

David York was the water reuse coordinator of Florida's Department of Environmental Protection (DEP) since the start of its reuse program in the mid-1980s. He worked at DEP for over 25 years and was the primary architect of their internationally recognized reuse program. His career in water reuse and environmental management spans more than 30 years. York is a member of the WEF Water Reuse Committee, vice-chair of the Florida Water Environment Association's Water Reuse Committee, chair of Florida's Reuse Coordinating Committee, and a member of the National Water Research Institute's Research Advisory Board.



Mike Sharar, Principal, Mike Sharar Consulting

Mike Sharar served as the first executive director of the LOTT (Lacey, Olympia, Tumwater and Thurston County) Alliance for 15 years until 2002. He currently provides consulting services for the Washington State Department of Ecology in connection with the planned Spokane River TDML project and is part of a three-person team assisting Mason County to develop a strategic plan for wastewater management along Hood Canal.

Dick Finger, Wastewater Consultant

Dick Finger served 38 years in the wastewater industry: 30 as process control supervisor and eight as King County West Point Treatment Plant manager. He has authored a number of WEF manuals and publications, and given numerous presentations on odor control, process control, water reuse and other pertinent topics. Finger is a past recipient of the Hatfield and Gascoigne Awards for his leadership in the wastewater treatment industry.



Henryk Melcer, Senior Process Engineer, Brown and Caldwell

Henryk Melcer has 28 years professional experience, the past 13 with Brown and Caldwell. Melcer provides process modeling expertise in design of biological treatment systems, serves as the Northwest regional process engineering lead, and is a nationwide resource in design of industrial wastewater treatment facilities. Recent local projects include process design of the Hawks Prairie Membrane Bioreactor (MBR), preliminary design of MBR and BAF alternatives for King County's Brightwater Treatment Plant, and capacity assessments of activated sludge treatment plants for Pierce County (Chambers Creek), Central Kitsap, Richland and the South Treatment Plant in Renton, Washington.



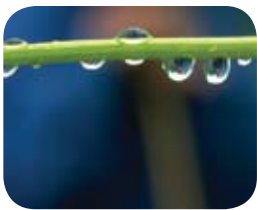
**Bob Bucher, King County Wastewater Treatment Division,
Advanced Technology Demonstration Projects**

Bob Bucher is head of process testing and development for the King County Wastewater Treatment Division's Technology Assessment Program. Bucher is responsible for piloting the testing of multiple MBR systems as preparation for design and operation of new King County membrane treatment plants. Bucher's process experience includes operation of membrane bioreactors, micro-filtration membranes, reverse osmosis membranes and fuzzy filter media filtration.



Ben McConkey, Operations Supervisor, LOTT Alliance

Ben McConkey is responsible for planning, organizing, and supervising operations staff for LOTT's Budd Inlet Treatment Plant and Hawks Prairie Reclaimed Water Satellite. Operations staff works round the clock to monitor LOTT facilities. With 17 years experience in wastewater operations and maintenance, McConkey joined the LOTT team in August 2005.



Kirk Holmes, Public Works Director, City of Snoqualmie

Kirk Holmes is director of Public Works for the City of Snoqualmie, Washington. A unique and successful partnership between the City of Snoqualmie and Weyerhaeuser Development Corporation brought a Class A water reclamation facility into existence in October 1998—just in time to meet growth and groundwater protection requirements for the city. Snoqualmie uses Class A reclaimed water for golf course and landscape irrigation.



Jim Hill, Water Reclamation Division Administrator, City of Medford

Jim Hill is administrator of the Medford Regional Water Reclamation Facility, which treats approximately 17 million gallons per day of wastewater for the Rogue Valley in southern Oregon (except Ashland). Hill came to Medford in 1991 from the San Francisco Bay area, where he was a consultant before working at two national award winning treatment plants in Contra Costa County. Hill is a registered professional engineer with an emphasis in environmental engineering and too many years experience to discuss publicly.



Robin Saunders, Director of Water and Sewer Utilities, City of Santa Clara

Robin G. Saunders was hired in 1977 to help the City of Santa Clara develop a municipal solar utility. Saunders has been involved in many of Santa Clara's unusual and creative projects: several upgrades of the utilities' SCADA/telemetry systems; modernization of storm, sewer and water pumping facilities; and from 1986 to 1999, project manager for the City's water recycling system. The past several years have seen water recycling evolve to a regional issue balancing the need for sewer effluent diversion and water supply. Institutional matters such as State and Federal directives, inter-agency agreements and "creating new paradigms" have overshadowed technical issues as the primary concerns of water recycling in Santa Clara. Saunders helped write and edit *The Energy Primer*, a book on alternative and renewable energy sources for rural areas and developing countries.



Mark Cullington, Senior Scientist, Kennedy/Jenks Consultants

Mark Cullington is company-wide Biosolids leader and Pacific Northwest regional recycled water sector leader with Kennedy/Jenks Consultants. Cullington's background includes work in Biosolids, reclaimed water, and organic residuals management; and expertise in Biosolids and reclaimed water treatment; beneficial reuse permitting; and regulatory compliance. Before joining Kennedy/Jenks, Cullington was Oregon's water quality program manager, with statewide responsibility for multiple federal and state regulatory programs. He managed Oregon's Biosolids, reclaimed water, onsite wastewater treatment systems, underground injection control, and drinking water protection programs.



Karla Fowler, Planning and Programs Director for the LOTT Alliance

Karla Fowler is planning and programs director for the LOTT Alliance. Fowler is responsible for reclaimed water and wastewater flow reduction programs, as well as public information and involvement, planning, environmental evaluations, and regulatory permitting. Fowler has worked with LOTT for more than 11 years, and was previously co-owner and manager of a public relations consulting firm specializing in public environmental projects.



Lars Hendron, Project Manager, City of Spokane

Lars Hendron has been with the City of Spokane for 16 years and is currently a principal engineer in the Wastewater Management Department. Hendron oversees the two main capital programs: treatment plant upgrades and combined sewer overflow reduction. Faced with installing effluent filtration to meet one or more TDML, Spokane is nearing the start-up stage of a two-year re-use pilot to test irrigation at golf courses for phosphorus TMDL. In addition to a private consulting firm, Hendron's career includes working for federal, state and local governments.



Scott Redman, Puget Sound Action Team

Scott Redman has held various positions with the Puget Sound Action Team (PSAT) since August 1996, including appointment by Governor Gary Locke to serve as chair of PSAT and director of Action Team staff in the interim between permanent appointments (March 2002 to March 2003). PSAT is a leader in developing partnerships to protect and restore Puget Sound and its spectacular diversity of life, both now and for future generations. Established by the state legislature in 1996, the partnership defines, coordinates and implements the Washington State environmental agenda for Puget Sound.

Declaration of Support for Reclaimed Water

We invite you to join in supporting the use of reclaimed water within the State of Washington. There will be an opportunity for you to sign this statement of support at this workshop.



Whereas, reclaimed water is an alternative water supply created from highly treated wastewater; and

Whereas, reliable and safe supplies of water are essential for meeting the existing and future needs of people, fish, farming, industry, and recreation; and

Whereas, the need for water in our state will likely grow as the result of population growth, economic development, and stream flow restoration; and

Whereas, according to peer-reviewed research from the University of Washington, global climate change is expected to result in the following impacts to the climate of the Pacific Northwest: reduced snow pack and associated strains on drinking water supplies, changes in winter flooding patterns, reduced summer stream flows for fish, and altered habitat for other wildlife; and

Whereas, reclaimed water is a safe alternative to drinking water (potable water) for approved uses such as irrigating golf courses and parks, fire fighting, toilet flushing, and industrial process cooling; and

Whereas, reclaimed water can also be used to create and repair wetlands, recharge groundwater, and augment stream flow, and thus enhance habitat for fish; and

Whereas, the more that reclaimed water is produced and used, the amount of wastewater that enters our water bodies, including Puget Sound, will decrease; and

Whereas, the Washington State Departments of Ecology and Health regulate reclaimed water under comprehensive standards for protection of public health and the environment; and

Whereas, the State of Washington has made it a policy since 1993 to encourage the use of reclaimed water to augment or replace the state's available potable water supplies; and

Whereas, the Legislature in 2006 directed the Department of Ecology, with support from the Department of Health, to update the state's reclaimed water standards by 2010 to reflect state-of-the-art technology and allow expanded uses of reclaimed water; and

Whereas, communities in Washington and other states, including California, Florida, Arizona, and Texas, have successfully used reclaimed water to supplement their water supplies without threatening existing water resources or public health; and

Whereas, local governments throughout the state are including expanded use of reclaimed water in their strategies for fish recovery and for meeting water quality goals; and

Whereas, use of reclaimed water is growing nationwide and around the world.

Now, therefore, we resolve to continue to encourage and promote the development and use of reclaimed water in the State of Washington, to work together to overcome barriers to its use, to ensure protection of public health and environmental quality, and to promote public acceptance of reclaimed water.



Statewide Steering Committee and Utility Contact Information

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253-941-1516
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Allen de Steiguer, PNCWA Water Reuse Committee Chair
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Jo Sullivan, Project Manager
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Hal Thomas, Public Works Director
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Dan Thompson, Division Manager
Wastewater Operations Division,
City of Tacoma Public Works
253-502-2191
www.cityoftacoma.org

Important information on CEUs

If you are interested in receiving CEUs for today's workshop, be sure to get a CEU sheet at the registration table. Follow the instructions on the sheet for verifying each session's attendance. At the end of the day, be sure to turn in your sheet at the registration table. Certificates will be mailed from the Pacific Northwest Clean Water Association (PNCWA) office to the address given on the CEU sheet.

Parking voucher

If you are parked in the Hilton garage, make sure that you have gotten a special rate parking voucher before leaving. With this voucher, the special workshop rate will be \$6.00.

Vegetarian info

The Hilton is preparing a limited number of vegetarian plates for today's luncheon. If you are a vegetarian, please request one from your server.

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